



Superfund At Work

Hazardous Waste Cleanup Efforts Nationwide

Powersville Site Profile

Site Description:

A municipal landfill in an agricultural area of Peach County, Georgia

Site Size: 15 acres

Primary Contaminants:

Pesticides, vinyl chloride, copper, zinc, and lead

Potential Range of Health Risks:

Direct contact with contaminants could cause skin rashes or respiratory problems

Nearby Population Affected:

150 people within one mile

Ecological Concerns:

Orchards, crops and livestock

Year Listed on NPL: 1984

EPA Region: IV

State: Georgia

Congressional District: 3

Success In Brief

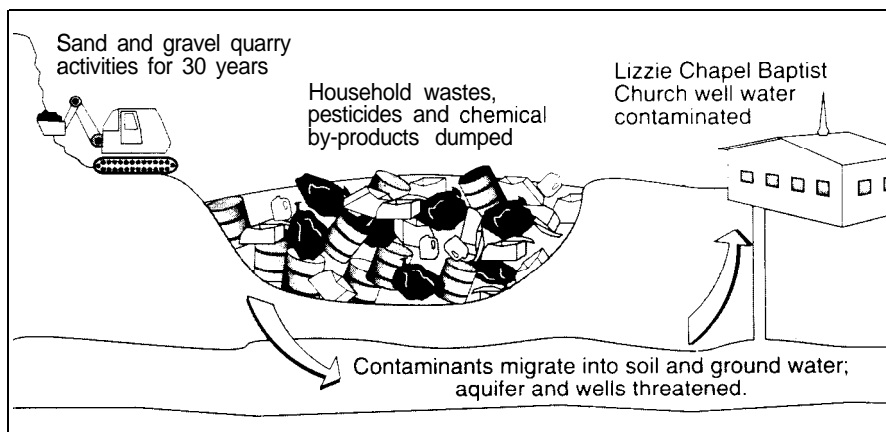
Pesticide Contamination Addressed At Powersville Dump Site

The U.S. Environmental Protection Agency (EPA) encountered much more than a municipal landfill at the Powersville site in Peach County, Georgia. Contamination from improperly dumped hazardous wastes and pesticides tainted an old quarry used for household garbage. Chemicals migrating into area ground water threatened local drinking water supplies. To address these issues, EPA's Superfund program designed a cleanup strategy that included:

- Negotiating with the county and chemical companies to contain the hazardous wastes on site underneath a protective cover;
- Investigating reports of drinking water contamination and extending municipal water lines to affected residents; and
- Conducting a tailored community relations program to inform and educate residents about the site.

EPA's Superfund program effectively halted the further migration of contaminants into the environment and ensured the safety of future drinking water supplies.

Pesticide Contamination At Powersville Dump



The Site Today

A multi-layer synthetic cover was completed in 1992, and is containing wastes at the site. Construction has been completed to extend municipal water lines to homes with affected wells.

An alternate drinking water supply will become available in spring 1993, and final inspection is scheduled for fall 1993.

A Site Snapshot

The Powersville landfill covers 15 acres in Peach County, Georgia. The surrounding area is mainly agricultural, used for orchards and raising live-stock. The Lizzie Chapel Baptist Church is adjacent to the site, and about 150 people live within one mile.

Sand and gravel were quarried at the site from the early 1940s to 1969. That year, Peach County began using the quarry as a sanitary landfill. For 10 years, the landfill received primarily household wastes. An undetermined number of companies also disposed of

pesticides and chemical by-products at the site.

Vinyl chloride, zinc, copper, lead and pesticides migrated into ground water and soil

The landfill's floor is composed mainly of sand and gravel, allowing water and contaminants to move freely through the soil. Vinyl chloride, zinc, copper, lead, and pesticides all migrated into ground water and soil. Fifteen area drinking wells and the aquifer underneath the site were threatened.

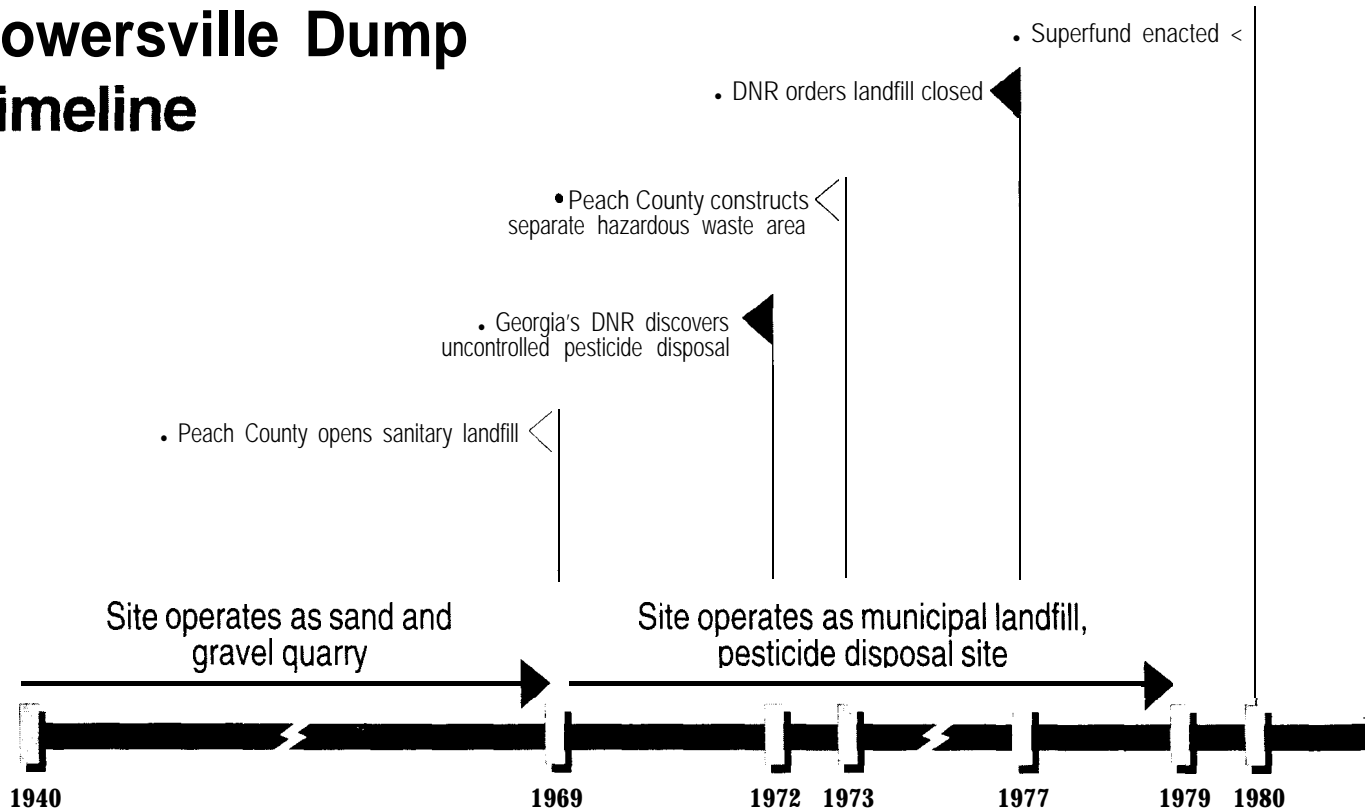
Contact with contaminated soil could cause skin rashes or respiratory problems. Drinking affected water could have led to an increased risk of cancer in both residents and cattle.

Powersville Grave

For nearly 30 years, the Powersville site was a sand and gravel quarry that supplied construction materials. In 1969, when other county dumps were full, Peach County began using the pit as a landfill for household and industrial wastes. The site received wastes daily.

Disposal and maintenance activities were monitored regularly by county officials. During this time, an unknown number of companies also dumped pesticides, their containers, and chemicals used in pesticide production at the site. Such practices were common then, since the dangers of pesticides were not widely recognized.

Powersville Dump Timeline



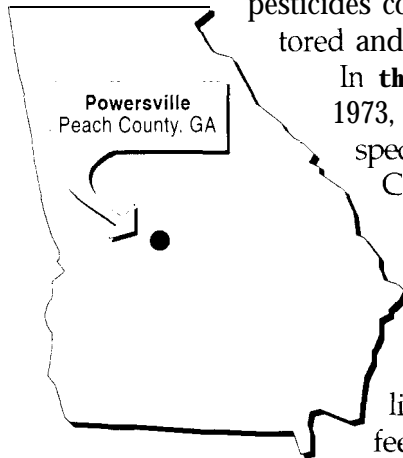
1 Quarry Filled With Hazardous Waste

Many of these pesticides have since been banned from domestic use. The production, sale and use of DDT, for example, was banned in 1972. At this time, a wide range of other environmental issues was becoming part of the national consciousness.

Early Efforts Protect Environment and Citizens

During a routine inspection in October 1972, Environmental Protection Division (EPD) officials from Georgia's Department of Natural Resources (DNR) took a new look at the Powersville dump. EPD voiced concern over

the obvious disposal of pesticides at the landfill and recommended that a separate hazardous waste disposal section be created so that pesticides could be monitored and controlled.



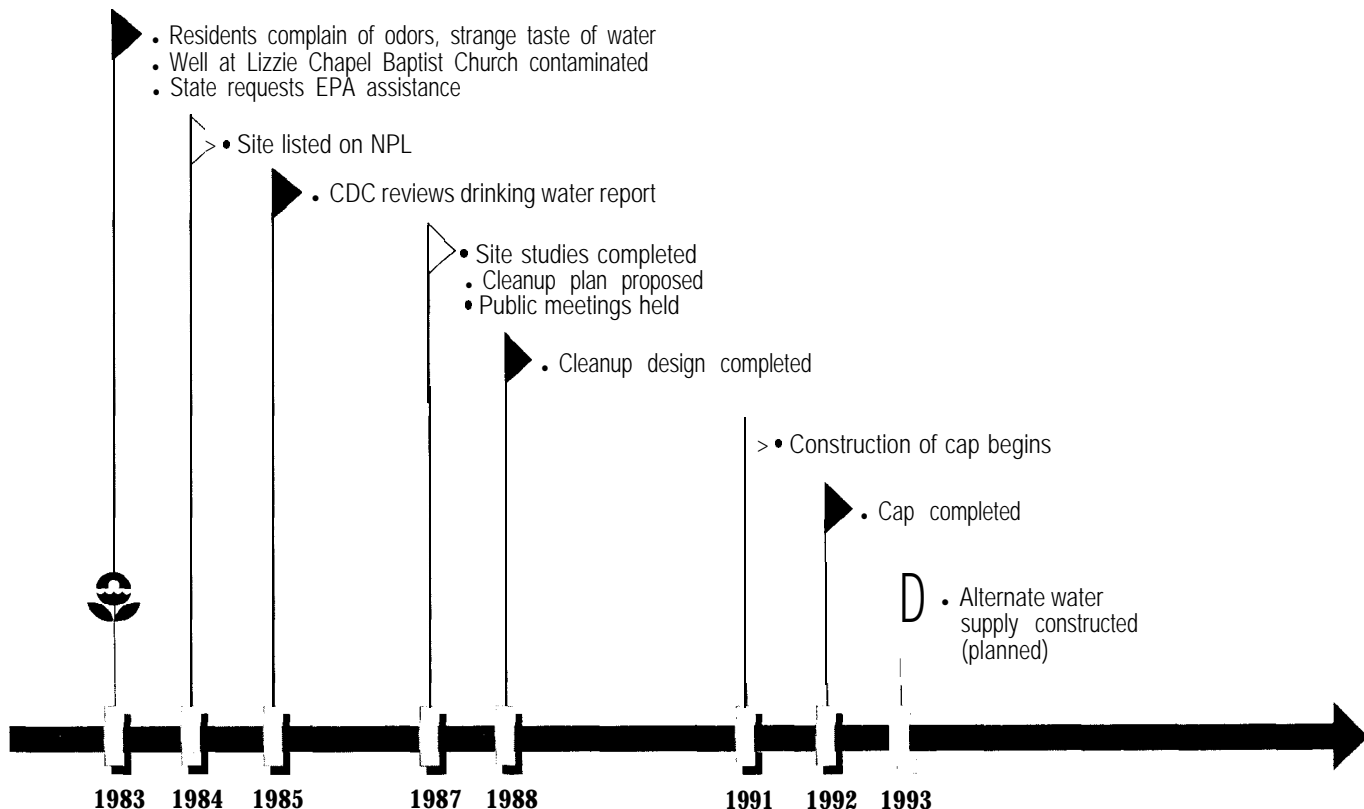
In the summer of 1973, following EPD's specifications, Peach County officials designated a separate one-acre area for the hazardous wastes. They lined it with five

feet of clay and ran trenches through the area to collect runoff and prevent pesticide migration.

Without these precautions, contaminated rain water could

either have seeped into the soil and ground water or run off the site onto surrounding land. The county also enclosed the area with a cyclone fence, and posted warning signs.

In March 1977, EPD recommended that further disposal of these pesticides at the site be prohibited and asked the Peach County Board of Commissioners to close the landfill. The EPD expressed concern that despite the precautions taken, the sand and gravel floor could still permit chemicals to filter into soil and ground water, threatening drinking supplies. In early 1979, the county stopped accepting all wastes at the site.





On The Horizon An expansive vista of cleanup activities at the Powersville site. The white building visible near the site is Lizzie Chapel Baptist Church.

State Officials Detect Ground Water Problems

While the Powersville dump was still accepting wastes, local residents complained to EPD about foul odors and wastes blowing from the site. They also reported that their drinking water tasted bad and was often discolored. In 1983, EPD began sampling area wells for contamination, and found that a well at the

**By August 1983,
EPD officials
recommended that
church members stop
using their well water**

church next to the site was contaminated with trace levels of pesticides.

In May 1983, EPD sampled several other wells in the area, but none showed evidence of contamination. EPD analysts re-tested the church well, and found that the contamination levels had increased. Contaminated ground water was moving from underneath the site and affecting the church's drinking supplies. By

August 1983, EPD officials recommended that church members stop using their well water.

EPD then contacted the EPA Superfund program for assistance. This national cleanup program had been launched in 1980 in response to widespread concern about hazardous waste sites around the country.

EPA's Site Study Assesses Threats

In response to the state's request, EPA proposed Powersville to the National Priorities List (NPL), the nation's roster of hazardous waste sites eligible for cleanup under the Superfund program. In September 1983, EPA began studying the ground water problem by monitoring the site and the surrounding area to determine whether the contamination was spreading, and if so, how fast. Samples from monitoring wells confirmed that ground water beneath the site was contaminated with pesticides, metals and vinyl chloride. Based on these findings, the site was officially listed on the NPL in September 1984.

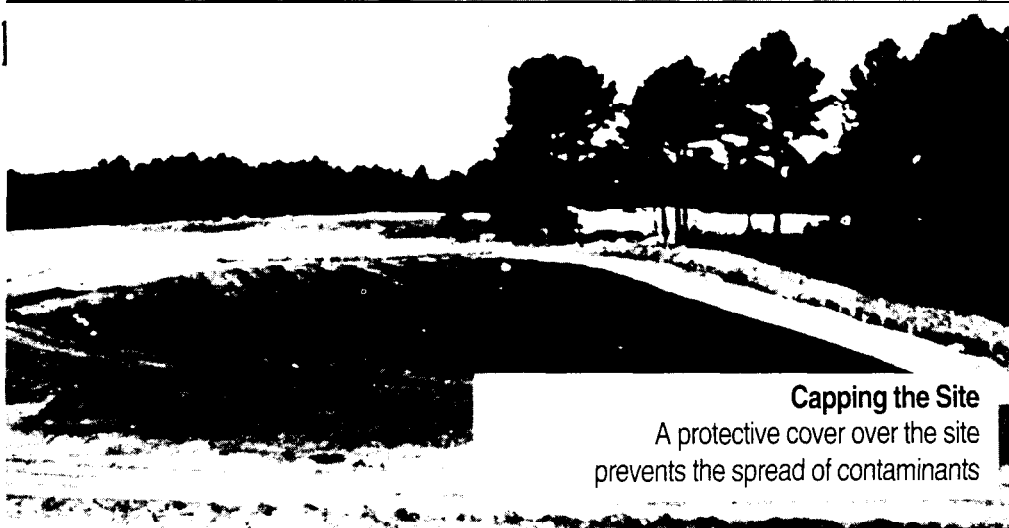
EPA's Community Relations Allay Local Concerns

Concerned by the sampling results, residents asked that their wells be re-tested and EPA complied. Samples revealed extremely low levels of contamination in some private wells.

The levels of contaminants were within the safety standards set by the Safe Drinking Water Act. Nevertheless, Superfund staff wanted to reassure the community as to the accuracy of the testing. Thus, EPA requested that the Centers for Disease Control (CDC) review sampling results to ensure that the drinking water posed no threat to residents.

In April 1985, CDC confirmed EPA's findings; there was no need to provide an alternate water supply to the community.

This outside analysis was just one of the many extra steps Superfund staff took to satisfy the concerns of area residents. Parties responsible for the contamination at the site also played a role in addressing community concerns. Their efforts led to community support for Superfund activities at Powersville (see Community Relations on page 5).



Capping the Site

A protective cover over the site prevents the spread of contaminants

EPA Negotiates at Powersville

One of the objectives of the Superfund program is to obtain private party commitments to clean up hazardous waste sites. During preliminary investigations, EPA identified some of the

EPA undertook investigations at the Powersville site

parties who were responsible for hazardous wastes at the Powersville site. One was Peach County; another was Canadyne Georgia, which owns Woolfolk Chemicals.

EPA began negotiations with them to perform studies at the site and to develop cleanup options. However, these negotiations ended unsuccessfully, so EPA undertook the site investigations.

The Cleanup Plan

Following these studies in September 1987, EPA chose a cleanup approach which included:

- A multi-layer synthetic "cap" to cover the site and to prevent rain water from spreading contaminants;
- A channel to keep rain water off the cover and away from the hazardous wastes;
- On-site monitoring wells to allow scientists to track the nature and movement of contaminants; and
- Extension of municipal water lines to serve area residents with affected wells, even though contamination was within acceptable drinking water standards.

EPA then successfully negotiated with the responsible parties to perform the design and construction of cleanup activities. Under EPA supervision, they began designing the protective cover in December 1988, and completed it in January 1991.

Community Relations At Powersville

- **A Constant Vigil** – The site manager overseeing construction activities became an active member of the community. He interacted with citizens on a daily basis.
- **The Observation Deck** – The parties responsible for conducting the cleanup built a tower from which the public could observe site activities.
- **Discussion of Plans** – In August 1987, EPA held a public meeting to discuss the proposed comprehensive cleanup plan for the site. This allowed EPA to respond directly to residents' questions.
- **Community Relations Activities** – A strategy was worked out with the public to allow easy interaction with EPA to obtain information and get frequent updates
- **Progress Meetings** – In August 1991, Superfund staff held an open house to address any questions the community had about ongoing cleanup activities
- **Face-to-Face Discussions** – Superfund staff personally visited residents throughout the cleanup, recognizing the importance of their problems and concerns, and incorporating their suggestions in the cleanup plan.

Cleanup Nears Completion

The Protective Soil Cover

Following completion of the protective cover, extra monitoring wells were installed in 1992.

Samples are now taken quarterly to test the ground water. The site's future uses will be limited to ensure that the cover's integrity is not compromised. The site will be monitored for 30 years to verify that no future problems arise. The Superfund program may enlist the help of the State of Georgia to oversee these activities.

The Water Supply

The parties conducting the cleanup started installing new water lines in 1992. Water line extensions were completed in March 1993.

The new lines extend from the municipal water system of the town of Byron nearby. All affected residences had an opportunity to be connected free of charge prior to March 1993.

For additional copies of this or other *Superfund At Work* updates, contact the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487-4650.

If you wish to be added to or deleted from our mailing list or to comment on this bulletin's content, length or format, please call (703) 603-8984 or send a letter to *Superfund At Work* (5502G), 401 M Street SW, Washington, DC 20460.

Success at Powersville Dump

Cleanup actions at the site have been completed.

EPA's efforts resulted in successful cooperation with the responsible parties and the community to address the hazardous waste problem at the site.

EPA is working with the community to address remaining concerns regarding the site, while simultaneously eliminating health threats, and preventing further contamination.



United States Environmental Protection Agency
5502G
Washington, D.C. 20460

Official Business
Penalty for Private Use \$300

First Class Mail
Postage and Fees Paid
EPA
Permit No. G-35